



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,442	10/07/2005	Norifumi Kikkawa	09812.0116	7253
22852	7590	09/21/2011		
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER CHAO, MICHAEL W	
			ART UNIT 2492	PAPER NUMBER
			MAIL DATE 09/21/2011	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,442

Applicant(s)

KIKKAWA ET AL.

Examiner

Michael Chao

Art Unit

2492

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30, 33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/30/2010 has been entered.

Claims 1-30, 33 and 34 are pending and directed to a content providing server and information processing device.

Response to Arguments

Applicant's arguments, see page 20, filed 3/30/2010, with respect to the rejection(s) of claim(s) 1-30, 33 and 34 under Rakib (US 6,970,127), in view of Shinman et al. (US 2002/0019827), in view of Tso et al. (US 6,421,733), in view of Sie et al. (US 7,024,679) have been fully considered and are persuasive. The prior rejection did not teach switching content automatically at the server without a subsequent request from the client. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Rakib (US 6,970,127), in view of Barton et al. (US 2003/0182567), in view of Harrison et al. (US 5,878,222), in view of Gandhi et al. (US 7,085,814).

1 Applicant's arguments filed 3/30/2010 have been fully considered but they are
2 not persuasive.

3 Although Applicant argues (page 17) that "multiple data as a unit of content" is
4 clear because it "includes arranging a plurality of contents as a single unit", is
5 unpersuasive. Examiner would point out that the claim itself does not describe what
6 "arranging" comprises. As stated below, this may comprise a particular data structure, a
7 particular way of handling the data, or possibly merely implying that the data is handled
8 simultaneously. Since the claim is silent with regard to what "arrangement of the first
9 content and the second content as a unit of content" actually requires, the limitation is
10 ambiguous since it leaves the reader guessing what manner of arrangement is
11 intended.

12 Applicant argues (page 18) that the dual functionality of a "channel list URL" is
13 not prohibited. As now elaborated upon below, a "channel list URL" has no accepted
14 meaning in the art, therefore since the claims are absent any limitation of its structure it
15 must solely be defined by its use. Since Applicant has provided dual uses it
16 subsequently has dual definitions and it becomes unclear whether the same structure is
17 used in both applications, or if it is a mere placeholder for some system data. Stated
18 more simply, the examiner cannot determine what a 'channel list URL' is since no
19 definition is provided.

20

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-30, 33 and 34 recite "the first content and the second content as a unit of content"; however, it is unclear what is required to set the content "as a unit" whether it requires a specific data structure, or some manner of process in handling the data. The limitation that the content be arranged as a unit is therefore ambiguous.

Claims 1-30, 33 and 34 generally contain references to a "channel list Uniform Resource Locator (URL)". This term appears to have different functionalities in different context among the claims without any explanation therefore. For instance, in claims 1 and 13 the term is stated to be a 'content identifier'; however, claim 13 recites also states that the client switches content based on the 'channel list URL' after the channel list URL has been sent to the server. Thus, there appears to be a dual functionality that is not plainly evident from the claim and as such the claims are indefinite.

In addition, a "channel list uniform resource locator (URL)" is not commonly used in the art. A URL is a string containing a location. How a string containing a location can be substituted as a "channel list" is unclear. While this incongruity is easily solved by assuming the "channel list URL" is not actually a URL as commonly known in the art, but instead some manner of data (data being anything), Applicant has now (Remarks page 19) and in the past argued that the prior art lacks the URL feature. As such, it is unclear how the prior art could lack a feature that is undefined.

Examiners will apply § 112, ¶ 6 to a claim limitation that meets the following conditions: (1) The claim limitation uses the phrase “means for” or “step for” or a non-structural term that does not have a structural modifier; (2) the phrase “means for” or “step for” or the non-structural term recited in the claim is modified by functional language; and (3) the phrase “means for” or “step for” or the non-structural term recited in the claim is not modified by sufficient structure, material, or acts for achieving the specified function.

This guideline modifies the 3-prong analysis in MPEP § 2181, which will be revised in due course.

(See Federal Register Vol. 76, No. 27 page 7167)

(URL: <<http://www.gpo.gov/fdsys/pkg/FR-2011-02-09/pdf/2011-2841.pdf>>)

With respect to claim 1, Claim elements (1) a data transmission/reception unit for; (2) a content storage unit for; (3) a content management unit for; (4) a content delivery unit for; (5) a storage unit control instance for; are a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function. It is unclear what structure or acts described in the specification are intended to be covered by the ‘means for’ limitations.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or

(c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification that perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

With respect to claim 13, there exists a 112 ¶6 issue identical to that above for the (1) input device for and (2) outputting device for.

Claim Rejections - 35 USC § 103

Claims 1-6, 8-10, 12-21, 23-25, 27-30, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rakib (US 6,970,127), in view of Barton et al. (US 2003/0182567), in view of Harrison et al. (US 5,878,222), in view of Gandhi et al. (US 7,085,814).

With respect to claims 1, 16 and 33, Rakib teaches: A content-providing server for executing content transmission to a client and content recording processing, the server comprising:

1 a tuner for executing data reception processing; ("Gateway 10 also has an
2 internal router and tuner and demodulation and detector circuitry" Rakib column 7 line
3 15)

4 a data transmission/reception unit ("Gateway 10 has an RF or infrared" Rakib
5 column 7 line 13) for executing communication processing between the server and a
6 client, ("Gateway 10 has an RF or infrared transceiver 32 therein to send and receive
7 data to/from remote 30" Rakib column 7 line 13) wherein the communication
8 processing includes communication of control information ("(2) change video channel
9 selections for the TV or remote" Rakib column 3 line 20) and content received by the
10 tuner, ("(1) monitor one video channel while watching another on a TV" Rakib column 3
11 line 20) the received content including a first content received by the tuner over a first
12 channel and a second content received by the tuner over a second channel; ("Receiver
13 106 has the ability to tune and demultiplex two separate logical channels simultaneously
14 in some embodiments. Typically this will be done by filtering out all MPEG packets
15 having two separate program descriptors (PID)" Rakib column 14 line 30)

16 a metadata storage unit including attribute information corresponding to the
17 received content, wherein the attribute information is stored as content information;
18 ("displaying a menu of programs that have been recorded and providing a menu to
19 issue commands to play a program," Rakib column 13 line 30)

20 a content storage unit for storing the received content ("displaying a menu of
21 programs that have been recorded and providing a menu to issue commands to play a
22 program," Rakib column 13 line 30)

1 a content management unit for processing the content information to be provided
2 to the client; and ("Operating system 116 cooperates with the remote control 100 to
3 receive commands to implement TIVO-like functions" Rakib column 12 line 1; Also
4 "displaying a menu of programs that have been recorded and providing a menu to issue
5 commands to play a program," Rakib column 13 line 30)

6 a content delivery control unit for processing the received content, the content
7 delivery control unit comprising: ("Gateway 10 also has an internal router and tuner and
8 demodulation and detector circuitry" Rakib column 7 line 15)

9 Rakib does not teach:

10 in an hierarchical content management directory, wherein the metadata storage
11 unit includes information describing the hierarchical management directory;

12 a tuner control instance for arranging the first content and the second
13 content as a unit of content, wherein a recording source content identifier is set
14 corresponding to the unit of content, and the recording source content identifier is a
15 channel list Uniform Resource Locator (URL); and

16 a storage unit control instance for storing the unit of content, wherein a
17 recording target content identifier is set corresponding to the unit of content, and
18 wherein the data transmission/reception unit uses the channel list URL to provide
19 the first content and the second content to the client by establishing a connection
20 between the server and the client, and

21 wherein the provided channel list URL is used to switch between the first content
22 and the second content by maintaining the connection and without setting a new URL to

switch from the first content that is received over the first channel to the second content that is received over the second channel. (Note that the channels are interpreted to be channels on which the server receives content.)

Barton teaches: in an hierarchical content management directory, ("preference objects are stored in the database as a hierarchy" Barton paragraph [0148]; see also [0136]; and aggregates [0124]; also program guide hierarchy of Figure 4 discussed in paragraph [0123]) wherein the metadata storage unit includes information describing the hierarchical management directory; (above program guides and paragraph [0127-138]; and metadata storage [0119])

a tuner control instance ("the scheduler accepts as input a prioritized list of program viewing preferences" Barton paragraph [0135]; and "the invention maintains two schedules, the Space Schedule 601 and the Input Schedule 602." Barton paragraph [0163]) for arranging the first content and the second content as a unit of content, ("the service provider may also provide aggregation viewing objects that are interrelated in some fashion . . ."; "the client system may further refine the collection" Barton paragraphs [0124-0125]) wherein a recording source content identifier is set corresponding to the unit of content (see Barton paragraphs [0172-0173] for recording of aggregate objects), and the recording source content identifier is a channel list ("For instance, a "Star-Trek" collection might contain references to all program guide objects associated with this brand name. Clearly, any arbitrary set of programs may be aggregated in this fashion." Barton paragraph [0124]; also "Program guide objects contain all information necessary for software running in the client system to tune,

1 receive, record and view programs of interest to the user of the client system" Barton
2 paragraph [0121]); and

3 a storage unit control instance ("It then loads the viewing object database
4 software from the disk drive, and begins execution of the application." Barton paragraph
5 [0180]) for storing the unit of content, wherein a recording target content identifier is set
6 corresponding to the unit of content ("In a system where programming may be captured
7 to internal storage, each captured program is represented by a new program guide
8 object, becoming available for viewing, aggregation, etc. Explicit viewer actions may
9 also result in creation of program guide objects." Barton paragraph [0125]), and

10 A person of ordinary skill in the art at the time of invention would have modified
11 Rakib with Barton by including the content and preference database ("area on the disk
12 from the object database or captured television programs." Barton paragraph [0180])
13 and the scheduler (Barton paragraph [0135]) of Baron in the system of Rakib. It would
14 have been obvious at the time the invention was made to a person of ordinary skill in
15 the art to modify Rakib with Barton in order to provide flexible content viewing by a
16 consumer using consumer preferences.

17 Further Rakib in view of Barton does not teach:

18 wherein the data transmission/reception unit uses the channel list URL to provide
19 the first content and the second content to the client by establishing a connection
20 between the server and the client, and

21 wherein the provided channel list URL is used to switch between the first content
22 and the second content by maintaining the connection and without setting a new URL to

1 switch from the first content that is received over the first channel to the second content
2 that is received over the second channel.

3 Harrison discloses a system that automatically switches channels ("if the priority
4 of the selected signal is higher than the currently displayed channel, the arbitrating unit
5 instructs the display window to take action on the selected television signal to preempt a
6 currently displayed window of a lower priority" Harrison Column 6 line 10) depending on
7 specified user preferences (Figure 3A; "the profile unit comprises a priority storage
8 location that stores priority data programmed by the user to prioritize each channel
9 being monitored." Harrison Column 4 line 60) on a home server ("a video cassette
10 recorder which includes components, such as the processor and the main memory"
11 Harrison column 3 line 15). As claimed:

12 wherein the provided channel list (Harrison Column 4 line 60 and Figure 3A; see
13 also the user specified aggregation of Barton paragraphs [0124-0125]) is used to switch
14 between the first content and the second content (Harrison Column 6 line 10) by
15 maintaining the connection and (without setting a new URL) [without the client sending
16 an additional request] (the preemption is done without user input (Harrison column 4
17 line 10) to switch from the first content that is received over the first channel to the
18 second content that is received over the second channel. ("Fig. 2 illustrates an
19 exemplary SPSU comprising a plurality of tuning units for receiving audio and video
20 signals (television signals)" Harrison column 3 line 34)

21 A person of ordinary skill in the art at the time of invention would have modified
22 Rakib in view of Barton with Harrison by further allowing a user to specify that viewing

1 preferences should determine displayed material (Harrison column 4 line 10). It would
2 have been obvious at the time the invention was made to a person of ordinary skill in
3 the art to modify Rakib in view of Barton with Harrison in order to allow a user to capture
4 and automatically display or record a video/audio signal based on the contents of
5 multiple channels (Harrison column 2 line 1).

6 Finally, Rakib in view of Barton in view of Harrison does not teach: wherein the
7 data transmission/reception unit uses the channel list URL to provide the first content
8 and the second content to the client by establishing a connection between the server
9 and the client. Applicant discloses that the channel list URL is UPNP control (Applicants
10 specification 2:3 where UPNP is used for control and specification 27:5-15 where the
11 channel list URL is used for acquisition and control) of the home server of Rakib (Rakib
12 column 4 line 54) by the client device (remote of Rakib column 7 line 14).

13 Gandhi discloses that UPNP is a desirable protocol for home appliances (Gandhi
14 column 37 line 25) including an intelligent VCR that could have identifiable services
15 such as a tuner service, I/O switch service, A/V decoding configuration service and
16 configurable timer services (Gandhi column 11 line 20). Where UPNP uses HTTP and
17 URL's to send commands (Gandhi column 11 line 55) over SOAP styled XML
18 messages (Gandhi column 17 line 58) by establishing a connection between client and
19 server (Gandhi column 20 line 37). As claimed: wherein the data transmission/reception
20 unit uses the channel list URL (Gandhi column 11 line 55) to provide the first content
21 and the second content (Gandhi column 11 line 20) to the client by establishing a
22 connection between the server and the client (Gandhi column 20 line 37).

1 A person of ordinary skill in the art at the time of invention would have modified
2 Rakib in view of Barton in view of Harrison by utilizing UPNP as a control protocol as
3 shown in Gandhi and including the elements necessary (shown in Gandhi figure 10).
4 This would be done by defining services ("The fundamental controllable entity in UPnP
5 is a Service" Gandhi column 6 line 53) for the various functions of the combination of
6 Rakib in view of Barton in view of Harrison, as exemplified by Gandhi (intelligent VCR
7 that could have identifiable services such as a tuner service, I/O switch service, A/V
8 decoding configuration service and configurable timer services. Gandhi column 11 line
9 20). It would have been obvious at the time the invention was made to a person of
10 ordinary skill in the art to modify Rakib in view of Barton in view of Harrison with Gandhi
11 in order to incorporate the flexibility of object oriented application calls over a network
12 (Gandhi column 2).

13 With respect to claims 13, 28, 34, Rakib in view of Barton in view of Harrison in
14 view of Gandhi substantially teaches the elements of claim 13, as shown above.
15 Regarding the additional limitations:

16 A processor for sending first protocol information including a function ID (Gandhi
17 column 19 describes requests to invoke actions on services) identifying the tuner
18 ("tuner" Gandhi column 9 line 22) receiving the content, and second protocol information
19 including a data storage unit function ID identifying a storage unit ("transport" Gandhi
20 column 9 line 22; and Rakib column 13 line 30 and Barton paragraphs [0172-0173]) of
21 the server storing the content received by the tuner

1 With respect to claim 2, Rakib in view of Barton in view of Harrison in view of
2 Gandhi teaches: wherein the recording source content identifier is included in the
3 storage unit control instance, and the storage unit control instance processes the first
4 content and the second content based on the recording source content identifier.
5 ("Program guide objects contain all information necessary for software running in the
6 client system to tune, receive, record and view programs of interest to the user of the
7 client system," Barton paragraph [0121])

8 With respect to claim 3, Rakib in view of Barton in view of Harrison in view of
9 Gandhi teaches: wherein the content management unit processes the content
10 information based on the content management directory, ("Operating system 116
11 cooperates with the remote control 100 to receive commands to implement TIVO-like
12 functions" Rakib column 12 line 1; See generally TIVO like functions of column 13) and
13 wherein the tuner control instance and the storage unit control instance set the
14 recording source content identifier and the recording target content identifier based on a
15 request from the client. (See also the combination of claim 1)

16 With respect to claim 4, Rakib in view of Barton in view of Harrison in view of
17 Gandhi teaches: wherein the channel list URL identifies a channel list including the first
18 channel and the second channel wherein the first content and the second content is
19 provided to the client based on a control request received from the client (see Barton
20 paragraphs [0172-0173] for recording of aggregate objects; and also Harrison Figure
21 3A; Harrison Column 4 line 60), the control request including the channel list URL (URL
22 controlled server, Gandhi column 11 line 55).

1 With respect to claim 5, Rakib in view of Barton in view of Harrison in view of
2 Gandhi teaches: wherein the recording source content identifier identifies a content
3 storage object corresponding to a content storage region included in the content storage
4 unit. ("a scheduling method is used to choose how each input is tuned, and what is
5 done with the resulting captured television signal" Barton paragraph [0132]; Also
6 paragraph [0128] and [0125])

7 With respect to claim 6, Rakib in view of Barton in view of Harrison in view of
8 Gandhi teaches: wherein the content management unit is configured to store setting
9 information corresponding to the received content, the setting information including time
10 information ("Another TIVO function is to save the place where a user stopped viewing a
11 program" Rakib column 13 line 35) and recording quality information, ("Another TIVO
12 function is providing the ability to record a program and any one of a plurality of selected
13 quality or resolution levels" Rakib column 12 line 55) and wherein the recording target
14 content identifier is set based on the setting information.

15 With respect to claim 8, Rakib in view of Barton in view of Harrison in view of
16 Gandhi teaches: wherein the first content is live content, and providing the first content
17 includes live streaming of the first content to the client. ("Another TIVO function is
18 pausing live TV for a bathroom break, a phone call, etc." Rakib column 13 line 45; also
19 "When live programming is viewed . . ." Barton paragraph [0137])

20 With respect to claim 9, Rakib in view of Barton in view of Harrison in view of
21 Gandhi teaches: wherein recording target content identifier includes a content storage

1 object URL. (Barton paragraph [0125] and Gandhi column 19 lines 25-40, URLs
2 identifying services, where as combined in claim 1).

3 With respect to claim 10, Rakib in view of Barton in view of Harrison in view of
4 Gandhi teaches: wherein the content information includes protocol information including
5 a function ID (Gandhi column 19 describes requests to invoke actions on services) to
6 identify the tuner ("tuner" Gandhi column 9 line 22), the function ID being used to
7 determine the tuner control instance and the storage unit control instance ("transport"
8 Gandhi column 9 line 22; and Rakib column 13 line 30 and Barton paragraphs [0172-
9 0173]).

10 With respect to claim 12, Rakib in view of Barton in view of Harrison in view of
11 Gandhi teaches: wherein the content delivery control unit receives a Simple Object
12 Access Protocol [(SOAP)] content request from the client. (Gandhi column 17 line 58)

13 With respect to claim 14, Rakib in view of Barton in view of Harrison in view of
14 Gandhi teaches: wherein the processor sends a request to set the recording source
15 content identifier, ("(2) change video channel selections for the TV or remote" Rakib
16 column 3 line 20) the recording source content identifier being set to correspond to a
17 control instance of the tuner. Looking to Applicants specification as published (US
18 2006/0212531) paragraph [0029], this section has been interpreted as "the recording
19 source content identifier being sent to the corresponding tuner control instance", since
20 the tuner control instance requires the recording source content identifier: ostensibly to
21 know what content to tune to. ("Program guide objects contain all information necessary

for software running in the client system to tune, receive, record and view programs of interest to the user of the client system” Barton paragraph [0121])

With respect to claim 15, Rakib in view of Barton in view of Harrison in view of Gandhi teaches: wherein the processor sends a request to set a recording target content identifier. (“the client system may further refine the collection” Barton paragraph [0125]; also the actions of Harrison’s Figure 3A)

With respect to claim 17, Rakib in view of Barton in view of Harrison in view of Gandhi teaches: setting the recording source content identifier to correspond to a recording unit control instance. Looking to Applicants specification as published (US 2006/0212531) paragraph [0053], this section has been interpreted as “sending the recording source content identifier to the recording unit control instance”, since the recording unit control instance requires the recording source content identifier: ostensibly to know what content to store. (“Program guide objects contain all information necessary for software running in the client system to tune, receive, record and view programs of interest to the user of the client system” Barton paragraph [0121])

With respect to claim 18, Rakib in view of Barton in view of Harrison in view of Gandhi teaches:

storing the recording target content identifier as the metadata; and
processing the metadata based on a request from the client. (“In a system where programming may be captured to internal storage, each captured program is represented by a new program guide object, becoming available for viewing,

aggregation, etc. Explicit viewer actions may also result in creation of program guide objects." Barton paragraph [0125])

With respect to claim 19, Rakib in view of Barton in view of Harrison in view of Gandhi teaches: wherein the channel list URL (URL controlled server, Gandhi column 11 line 55).identifies the first channel and the second channel (see Barton paragraphs [0172-0173] for recording of aggregate objects; and also Harrison Figure 3A; Harrison Column 4 line 60).

With respect to claim 20, Rakib in view of Barton in view of Harrison in view of Gandhi teaches: wherein the recording target content identifier identifies a content storage object included in a content storage region in the server. (see claim 5)

With respect to claim 21, Rakib in view of Barton in view of Harrison in view of Gandhi teaches: processing setting information associated with the received content, the setting information including time information and recording quality information, wherein the recording target content identifier is set based on the setting information. (see claim 6)

With respect to claim 23, Rakib in view of Barton in view of Harrison in view of Gandhi teaches: wherein the first content is live content and providing the first content includes live streaming of the first content to the client. (see claim 8)

With respect to claim 24, Rakib in view of Barton in view of Harrison in view of Gandhi teaches: wherein the recording target content identifier includes a content storage object URL. (see claim 9)

1 With respect to claim 25, Rakib in view of Barton in view of Harrison in view of
2 Gandhi teaches: setting protocol information corresponding to the received content, the
3 protocol information including a function ID to identify the tuner control instance and the
4 storage unit control instance. (see claim 10)

5 With respect to claim 27, Rakib in view of Barton in view of Harrison in view of
6 Gandhi teaches: wherein the control request, received from the client, is based on a
7 SOAP protocol. (see claim 12)

8 With respect to claim 29, Rakib in view of Barton in view of Harrison in view of
9 Gandhi teaches: sending a request to set the recording source content identifier, the
10 recording source content identifier being set to correspond to a control instance of the
11 tuner. (see claim 14)

12 With respect to claim 30, Rakib in view of Barton in view of Harrison in view of
13 Gandhi teaches: sending a request to set a recording target content identifier, the target
14 content identifier being set to correspond to a content storage region in the server. (see
15 claim 15)

16
17 Claims 7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over
18 Rakib (US 6,970,127), in view of Barton et al. (US 2003/0182567), in view of Harrison et
19 al. (US 5,878,222), in view of Gandhi et al. (US 7,085,814), in view of Official Notice.

20 With respect to claims 7 and 22, Rakib in view of Barton in view of Harrison in
21 view of Gandhi does not teach: wherein the content management unit is configured to
22 set a content storage object URL as the metadata. Looking to Applicants specification

1 as published (US 2006/0212531) paragraph [0432] and paragraph [0133] this content
2 storage object URL is described as a filepath/object identifier. Since Barton discloses
3 that the recorded (captured) objects have identifiers ("each captured program is
4 represented by a new program guide object" paragraph [0125]). Thus the combination
5 above has the metadata, but it does not describe that is also represented by a URL.
6 URLs are commonly known in the art to be object identifiers. Official Notice is taken
7 thereof. It would therefore have been obvious to modify Rakib in view of Barton in view
8 of Harrison in view of Gandhi by using a URL as an object identifier as known in the art.
9 It would have been obvious at the time the invention was made to a person of ordinary
10 skill in the art to modify Rakib in view of Barton in view of Harrison in view of Gandhi in
11 order to allow addressing of content using a commonly known schema.

12
13
14 Claims 11 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable
15 over Rakib (US 6,970,127), in view of Barton et al. (US 2003/0182567), in view of
16 Harrison et al. (US 5,878,222), in view of Gandhi et al. (US 7,085,814), in view of
17 Sharma et al. (US 7,159,224).

18 With respect to claims 11 and 26, Rakib in view of Barton in view of Harrison in
19 view of Gandhi does not teach: wherein the content delivery control unit is configured to
20 set a control instance that is configured to manage a connection between the server
21 and the client based on a connection management table corresponding to an instance

1 ID, the instance ID identifying the tuner control instance and the storage unit control
2 instance.

3 Sharma teaches said elements. Sharma discloses such elements:
4 wherein the content delivery control unit is configured to set a control instance
5 that is configured to manage a connection ("References to the object and its serializer
6 are passed as parameters to registerObject, which may generate a unique ID for the
7 object and adds a SOAPSerializationState for the object to its internal map." Sharma
8 column 32 line 15)

9 between the server and the client ("When client 510 prepares to send data to
10 server 510, such as when a remote call is made to a service endpoint 555 maintained
11 by server 530 . . . may serialize a Java object" Sharma column 30 lines 5-10)

12 based on a connection management table corresponding to an instance ID, the
13 instance ID identifying the tuner control instance and the storage unit control instance.
14 ("The SOAPSerializationState for an object may store a unique ID assigned to that
15 object and a reference to the serializer for the object" Sharma column 31 line 33)

16 A person of ordinary skill in the art at the time of invention would have modified
17 Rakib in view of Barton in view of Harrison in view of Gandhi with Sharma by using Java
18 objects on both the server and client, and communicating between them by using
19 serialization over the SOAP messages of Gandhi's UPNP protocol. It would have been
20 obvious at the time the invention was made to a person of ordinary skill in the art to
21 modify Rakib in view of Barton in view of Harrison in view of Gandhi in order to provide
22 an easily extensible interface that enables a flexible command structure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Chao whose telephone number is (571)270-5657. The examiner can normally be reached on 8-4 Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571)272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. C./
Examiner, Art Unit 2492
/saleh najjar/
Supervisory Patent Examiner, Art Unit 2492